

WO 01/20938

Claims

1. A method in a communication system for relocating a protocol termination point, comprising:

5 defining a protocol initialization unit containing predefined information of a first termination point of a first protocol by the first protocol;

transferring the protocol initialization unit from the first termination point to a second termination point by a
10 second protocol; and

initializing the second termination point based on the protocol initialization unit.

2. A method according to claim 1, wherein the protocol
15 initialization unit contains state information of the first protocol termination point.

sub a5 3. A method according to claim 1 or 2, wherein the first
termination point is located at a first network element of the
20 communication system and the second termination point is located at a second network element of the communication system.

4. A method according to claim 3, wherein the second network
25 element, upon receiving the protocol information unit, generates and transmits a response to the first network element by means of the second protocol.

sub a6 5. A method according to any of the preceding claims,
30 wherein the protocol initialization unit is encapsulated in a message transmitted between the first termination point and the second termination point by the second protocol.

sub a6
cont 6. A method according to any of the preceding claims,
wherein the protocol initialization unit is transparent for
the second protocol.

5

7. A method according to any of the preceding claims,
wherein the protocol initialization unit is transmitted via a
third network element between the termination points.

10 8. A method according to claim 7, wherein the transmission
is based on a radio access network application part (RANAP)
protocol.

sub a7
15 9. A method according to any of claims 1 to 6, wherein the
protocol initialization unit is transmitted by a direct
connection between the termination points.

10. A method according to claim 9, wherein the transmission
is based on a radio network subsystem application part (RNSAP)
20 protocol.

sub a8
25 11. A method according to any of the preceding claims,
wherein the predefined information of the first protocol
comprise one or several parameters of a radio resource control
protocol (RRC), medium access control protocol (MAC), radio
link control protocol (RLC), and/or packet data convergence
protocol (PDCP).

30 12. A method according to any of the preceding claims,
wherein the protocol initialization unit contains information
of at least one further protocol.

13. A method according to any of the preceding claims, comprising steps of:

defining at least one further protocol initialization unit containing predefined information of a further protocol

5 by the further protocol; and

transferring the further protocol initialization unit from the first termination point to the second termination point.

sub a 8
10 cont

14. A method according to claim 13, wherein the further protocol initialization unit is transferred between the termination points by a protocol that is different to the second protocol.

15 15. A method according to any of the preceding claims, wherein at least one of the termination points is located at one of the following: a base station controller, a radio network controller, a base station, a gateway.

20 16. A method according to any of the preceding claims, wherein the step of initializing the second termination point comprises setting the parameters of the second termination point into a state that is similar to the parameters of the first termination point before or at the time the relocation
25 procedure was initiated.

17. A communication system, comprising:

a first protocol termination point;

a second protocol termination point;

30 control means for relocating a first protocol from the first protocol termination point to the second protocol termination point, said control means being arranged to form a

WO 01/20938

protocol initialization unit containing predefined information of the first protocol at the first protocol termination point;

communication path based on a second protocol between the first and the second termination points for transferring the

5 protocol initialization unit; and

control means for initializing the second protocol termination point based on the protocol initialization unit.

18. A communication system according to claim 17, wherein the
10 protocol initialization unit contains state information of the first protocol termination point.

sub a 9)

19. A communication system according to claim 17 or 18,
wherein the control means for relocating are arranged to
15 encapsulate the protocol initialization unit into a message to be transmitted from the first termination point to the second termination point.

20. A communication system according to any of claims 17 to
20 19, wherein the first termination point is located at a first network element of the communication system and the control means for relocating are arranged in connection with the first network element.

21. A communication system according to any of claims 17 to
25 20, wherein the second termination point is located at a second network element of the communication system and the control means for initializing are arranged in connection with the second network element.

30

vi
sub-a9
cont
22. A communication system according to any of the claims 17 to 21, wherein the protocol initialization unit contains information of at least one further protocol.

5 23. A network element for use in a communication network, comprising:

a protocol termination point;

control means for relocating a first protocol from the protocol termination point to another protocol termination

10 point, said control means being arranged to form a protocol initialization unit containing predefined information of the first protocol at the protocol termination point; and

interface to said other protocol termination point based on a second protocol for transferring the protocol
15 initialization unit from the first termination point by means of the second protocol.

24. A network element according to claim 23, wherein the network element comprises a controller of a cellular
20 communication network.

sub-a10
25. A network element according to claim 23 or 24, wherein the control means for relocating are arranged to encapsulate the protocol initialization unit into a message to be
25 transmitted from the first termination point by means of the second protocol.

26. A network element according to any of claims 23 to 25, wherein the protocol initialization unit contains information
30 of at least one further protocol.

27. A network element for use in a communication network,
comprising:

a protocol termination point of a first protocol;

interface to another protocol termination point for

5 receiving a protocol initialization unit containing predefined
information of the first protocol at said other termination
point, wherein the interface is based on a second protocol;
and

10 control means for initializing the protocol termination
point based on the received protocol initialization unit.

28. A network element according to claim 27, wherein the
network element comprises a controller of a cellular
communication network.

15